

SEQUENCE LISTING

<110> DIVERSA CORPORATION
BARTON, Nelson R.
O'DONOOGHUE, Eileen
SHORT, Ryan
FREY, Gerhard
WEINER, David
ROBERTSON, Dan E.
BRIGGS, Steven
ZORNER, Paul

<120> CHIMERIC CANNULAE PROTEINS, NUCLEIC ACIDS ENCODING
THEM AND METHODS FOR MAKING AND USING THEM

<130> 564462006845

<140> Not Yet Assigned
<141> Concurrently Herewith

<150> 60/556,393
<151> 2004-03-24

<150> 60/605,192
<151> 2004-08-27

<160> 12

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 624
<212> DNA
<213> Pyrodictium abyssi

<400> 1

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caggcagtaa	gcgagccaat	agacgtagaa	agccacctcg	gcagcataac	ccccgcagcc	180
ggcgcacagg	gcagtgacga	cataggttac	gcaatagtgt	ggataaaagga	ccaggtcaat	240
gatgtaaagc	tgaaggtgac	cctgcgttaac	gctgagcagc	taaagcccta	cttcaagtac	300
ctacagatac	agataacaag	cggctatgag	acgaacagca	cagctctagg	caacttcagc	360
gagaccaagg	ctgtgataag	cctcgacaac	cccagcgccg	tgatagttact	agacaaggag	420
gatatagcag	tgctctatcc	ggacaagacc	ggttacacaa	acacttcgat	atgggtaccc	480
ggtgaacctg	acaagataat	tgtctacaac	gagacaaagc	cagtagctat	actgaacttc	540
aaggccttct	acgaggctaa	ggagggtatg	ctattcgaca	gcctgccagt	gatattcaac	600
ttccaggtgc	tacaagttagg	ctaa				624

<210> 2
<211> 207
<212> PRT
<213> Pyrodictium abyssi

<400> 2

Val	Lys	Tyr	Thr	Thr	Leu	Ala	Ile	Ala	Gly	Ile	Ile	Ala	Ser	Ala	Ala
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				20					25				30		
Ser	Phe	Tyr	Ala	Thr	Gly	Thr	Ala	Gln	Ala	Val	Ser	Glu	Pro	Ile	Asp
				35				40				45			
Val	Glu	Ser	His	Leu	Gly	Ser	Ile	Thr	Pro	Ala	Ala	Gly	Ala	Gln	Gly
				50				55				60			
Ser	Asp	Asp	Ile	Gly	Tyr	Ala	Ile	Val	Trp	Ile	Lys	Asp	Gln	Val	Asn
				65				70				75			80

Asp	Val	Lys	Leu	Lys	Val	Thr	Leu	Arg	Asn	Ala	Glu	Gln	Leu	Lys	Pro		
														85	90	95	
Tyr	Phe	Lys	Tyr	Leu	Gln	Ile	Gln	Ile	Thr	Ser	Gly	Tyr	Glu	Thr	Asn		
														100	105	110	
Ser	Thr	Ala	Leu	Gly	Asn	Phe	Ser	Glu	Thr	Lys	Ala	Val	Ile	Ser	Leu		
														115	120	125	
Asp	Asn	Pro	Ser	Ala	Val	Ile	Val	Leu	Asp	Lys	Glu	Asp	Ile	Ala	Val		
														130	135	140	
Leu	Tyr	Pro	Asp	Lys	Thr	Gly	Tyr	Thr	Asn	Thr	Ser	Ile	Trp	Val	Pro		
														145	150	155	160
Gly	Glu	Pro	Asp	Lys	Ile	Ile	Val	Tyr	Asn	Glu	Thr	Lys	Pro	Val	Ala		
														165	170	175	
Ile	Leu	Asn	Phe	Lys	Ala	Phe	Tyr	Glu	Ala	Lys	Glu	Gly	Met	Leu	Phe		
														180	185	190	
Asp	Ser	Leu	Pro	Val	Ile	Phe	Asn	Phe	Gln	Val	Leu	Gln	Val	Gly			
														195	200	205	

<210> 3

<211> 513

<212> DNA

<213> Pyrodictium abyssi

<400> 3

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gccgcaacaa	gcgagccaat	agacgttagag	agccacactca	gcagcatagc	ccctgctgct		180
ggcgcacagg	gcagccagga	cataggctac	ttcaacgtga	ccgccaagga	tcaagtgaac		240
gtgacaaaga	taaagggtgac	cctggctaac	gctgagcagc	taaaggcccta	tttcaagtac		300
ctacagatag	tgctaaagag	cgaggtagct	gacgagatca	aggccgtaat	aagcatagac		360
aagcctagcg	ccgtcataat	actagacagc	caggacttcg	acagcaacaa	cagagcaaag		420
ataagcgcca	ctgcctacta	cgaggctaag	gagggcatgc	tattcgacag	cctaccgcta		480
atattcaaca	tacaggtgct	aagcgtcagc	taa				513

<210> 4

<211> 170

<212> PRT

<213> Pyrodictium abyssi

<400> 4

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Asp	Leu	Ala	Leu	Leu	Ala	Gly	Phe	Ala	Thr	Thr	Gln	Ser	Pro	Leu	Asn	
										25				30		
Ser	Phe	Tyr	Ala	Thr	Gly	Thr	Ala	Ala	Ala	Thr	Ser	Glu	Pro	Ile	Asp	
										35		40		45		
Val	Glu	Ser	His	Leu	Ser	Ser	Ile	Ala	Pro	Ala	Ala	Gly	Ala	Gln	Gly	
										50		55		60		
Ser	Gln	Asp	Ile	Gly	Tyr	Phe	Asn	Val	Thr	Ala	Lys	Asp	Gln	Val	Asn	
										65		70		75		80
Val	Thr	Lys	Ile	Lys	Val	Thr	Leu	Ala	Asn	Ala	Glu	Gln	Leu	Lys	Pro	
										85		90		95		
Tyr	Phe	Lys	Tyr	Leu	Gln	Ile	Val	Leu	Lys	Ser	Glu	Val	Ala	Asp	Glu	
										100		105		110		
Ile	Lys	Ala	Val	Ile	Ser	Ile	Asp	Lys	Pro	Ser	Ala	Val	Ile	Ile	Leu	
										115		120		125		
Asp	Ser	Gln	Asp	Phe	Asp	Ser	Asn	Asn	Arg	Ala	Lys	Ile	Ser	Ala	Thr	
										130		135		140		
Ala	Tyr	Tyr	Glu	Ala	Lys	Glu	Gly	Met	Leu	Phe	Asp	Ser	Leu	Pro	Leu	
										145		150		155		160
Ile	Phe	Asn	Ile	Gln	Val	Leu	Ser	Val	Ser							
										165		170				

<210> 5

<211> 537

<212> DNA

<213> Pyrodictium abyssi

<400> 5

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caagcagtaa	gcgagccaat	agacgttagag	agccacctag	acaacaccat	agcccctgct	180
gccgggtgcac	aggctacaa	ggacatgggc	tacattaaga	taactaacca	gtcaaaaagtt	240
aatgtataaa	agctgaaggt	gactctcgct	aacgcccggc	agctaaagcc	ctacttcgac	300
tacctacagc	tagtactcac	aagcaacgccc	actggcaccg	acatggttaa	ggctgtgcta	360
agcctcgaga	agcctagcgc	agtcataata	ctagacaacg	atgactacga	tagcactaac	420
aagatacagc	taaaggtaga	agcttactat	gaggctaagg	agggcatgct	attcgacagc	480
ctaccagtaa	tactgaactt	ccaggtactg	agcgccgctt	gcagtccctt	gtggta	537

<210> 6

<211> 178

<212> PRT

<213> Pyrodictium abyssi

<400> 6

Met	Arg	Tyr	Thr	Thr	Leu	Ala	Leu	Ala	Gly	Ile	Val	Ala	Ser	Ala	Ala
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Ala	Leu	Ala	Leu	Leu	Ala	Gly	Phe	Ala	Thr	Thr	Gln	Ser	Pro	Leu	Ser
							20		25				30		
Ser	Phe	Tyr	Ala	Thr	Gly	Thr	Ala	Gln	Ala	Val	Ser	Glu	Pro	Ile	Asp
							35		40			45			
Val	Glu	Ser	His	Leu	Asp	Asn	Thr	Ile	Ala	Pro	Ala	Ala	Gly	Ala	Gln
							50		55			60			
Gly	Tyr	Lys	Asp	Met	Gly	Tyr	Ile	Lys	Ile	Thr	Asn	Gln	Ser	Lys	Val
							65		70			75		80	
Asn	Val	Ile	Lys	Leu	Lys	Val	Thr	Leu	Ala	Asn	Ala	Glu	Gln	Leu	Lys
							85				90		95		
Pro	Tyr	Phe	Asp	Tyr	Leu	Gln	Leu	Val	Leu	Thr	Ser	Asn	Ala	Thr	Gly
							100		105			110			
Thr	Asp	Met	Val	Lys	Ala	Val	Leu	Ser	Leu	Glu	Lys	Pro	Ser	Ala	Val
							115		120			125			
Ile	Ile	Leu	Asp	Asn	Asp	Asp	Tyr	Asp	Ser	Thr	Asn	Lys	Ile	Gln	Leu
							130		135			140			
Lys	Val	Glu	Ala	Tyr	Tyr	Glu	Ala	Lys	Glu	Gly	Met	Leu	Phe	Asp	Ser
							145		150			155		160	
Leu	Pro	Val	Ile	Leu	Asn	Phe	Gln	Val	Leu	Ser	Ala	Ala	Cys	Ser	Pro
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Leu	Trp														

<210> 7

<211> 395

<212> DNA

<213> Pyrodictium abyssi

<400> 7

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atatatgcgc	acaatgacgt	gaacataaca	aagctaaagg	tcacgcttgc	taacgctgca	180
cagctaagac	catacttcaa	gtacctgata	ataaagctag	taagcctgga	cagcaacggc	240
aacgagtccg	aggaaaaggg	catgataact	ctatggaagc	cttacgcccgt	gataatacta	300
gaccatgaag	atttcaacaa	cgacatcgac	aatgacggca	acaatgacgc	caagataagg	360
gtttagcct	actatgaggg	taaggaggt	atgct			395

<210> 8

<211> 131

<212> PRT

<213> Pyrodictium abyssi

<400> 8

Ser Phe Tyr Ala Thr Gly Thr Ala Gln Ala Val Ser Glu Pro Ile Asp
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 Val Val Ser Ser Leu Gly Thr Leu Asn Thr Ala Ala Gly Ala Gln Gly
 20 25 30
 Lys Gln Thr Leu Gly Asp Ile Thr Ile Tyr Ala His Asn Asp Val Asn
 35 40 45
 Ile Thr Lys Leu Lys Val Thr Leu Ala Asn Ala Ala Gln Leu Arg Pro
 50 55 60
 Tyr Phe Lys Tyr Leu Ile Ile Lys Leu Val Ser Leu Asp Ser Asn Gly
 65 70 75 80
 Asn Glu Ser Glu Glu Lys Gly Met Ile Thr Leu Trp Lys Pro Tyr Ala
 85 90 95
 Val Ile Ile Leu Asp His Glu Asp Phe Asn Asn Asp Ile Asp Asn Asp
 100 105 110
 Gly Asn Asn Asp Ala Lys Ile Arg Val Val Ala Tyr Tyr Glu Ala Lys
 115 120 125
 Glu Gly Met
 130

<210> 9
<211> 372
<212> DNA
<213> Pyrodictium abyssi

<400> 9
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 acaatagaga acaagactga cgtgaacgtt gtgaagctga agataaccct cgccaacgct 180
 gagcagctaa agccctactt cgactaccta cagatagtgc taaagagcgt tgacagcaac 240
 gagatcaagg ctgtgctaag cctcgagaag cccagcgcag tcataatact ggacaacgag 300
 gacttccagg gcggcgacaa ccagtgccag atagacgcca ccgcctacta cgaggctaag 360
 gagggtatgc ta 372

<210> 10
<211> 124
<212> PRT
<213> Pyrodictium abyssi

<400> 10
 Ser Phe Tyr Ala Thr Gly Thr Ala Glu Ala Thr Ser Glu Pro Ile Asp
 1 5 10 15
 Val Val Ser Asn Leu Asn Thr Ala Ile Ala Pro Ala Ala Gly Ala Gln
 20 25 30
 Gly Ser Val Gly Ile Gly Ser Ile Thr Ile Glu Asn Lys Thr Asp Val
 35 40 45
 Asn Val Val Lys Leu Lys Ile Thr Leu Ala Asn Ala Glu Gln Leu Lys
 50 55 60
 Pro Tyr Phe Asp Tyr Leu Gln Ile Val Leu Lys Ser Val Asp Ser Asn
 65 70 75 80
 Glu Ile Lys Ala Val Leu Ser Leu Glu Lys Pro Ser Ala Val Ile Ile
 85 90 95
 Leu Asp Asn Glu Asp Phe Gln Gly Gly Asp Asn Gln Cys Gln Ile Asp
 100 105 110
 Ala Thr Ala Tyr Tyr Glu Ala Lys Glu Gly Met Leu
 115 120

<210> 11
<211> 448
<212> DNA
<213> Artificial Sequence

<220>
<223> consensus sequence

<400> 11

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 acgttagaaag ccacacctaca catagccct gctgcggcg cacagggcag caggacatag 180
 gctacataaa ataacaagat agtgaacgta taaagctgaa ggtgaccctg ctaacgctga 240
 gcagctaaag ccctacttca agtacctaca gatagtgcta aaagcgacag caggcacacg 300
 agaaggcgtg ataaggctcg agaaggctag cgccgtcata atactagaca acgaggactt 360
 cgaagcacaa cagaaagaga agcaatagcc tactacgagg ctaaggaggg tatgctattc 420
 gacagcctcc tatataactc aggtctgt 448

<210> 12

<211> 140

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<400> 12

Val	Lys	Thr	Leu	Ala	Leu	Ala	Gly	Ile	Ile	Ala	Ser	Ala	Ala	Leu	Ala
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Leu	Leu	Ala	Gly	Phe	Ala	Thr	Thr	Gln	Ser	Pro	Leu	Ser	Phe	Tyr	Ala
						20			25				30		
Thr	Gly	Thr	Ala	Gln	Ala	Val	Ser	Glu	Pro	Ile	Asp	Val	Glu	Ser	His
							35		40			45			
Leu	Ser	Ile	Ala	Pro	Ala	Ala	Gly	Ala	Gln	Gly	Ser	Asp	Ile	Gly	Tyr
							50		55		60				
Ile	Ile	Lys	Val	Asn	Val	Val	Lys	Leu	Lys	Val	Thr	Leu	Ala	Asn	Ala
							65		70		75			80	
Glu	Gln	Leu	Lys	Pro	Tyr	Phe	Lys	Tyr	Leu	Gln	Ile	Val	Leu	Ser	Ser
							85		90			95			
Glu	Ile	Lys	Ala	Val	Ile	Ser	Leu	Asp	Lys	Pro	Ser	Ala	Val	Ile	Ile
							100		105			110			
Leu	Asp	Glu	Asp	Phe	Ala	Ile	Ala	Tyr	Tyr	Glu	Ala	Lys	Glu	Gly	Met
							115		120			125			
Leu	Phe	Asp	Ser	Leu	Pro	Val	Ile	Asn	Gln	Val	Leu				
							130		135			140			